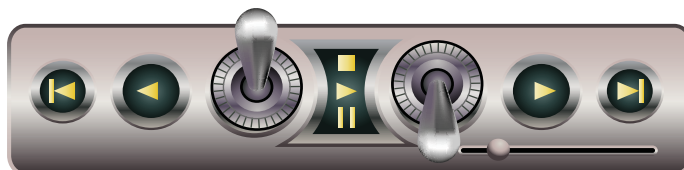


# Flight Surgeon Refresher Course

## Section 5: Aeromedical Fitness

US Army Aeromedical Policy  
Updates (FSRC505)

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# US ARMY AEROMEDICAL POLICY UPDATES

## Introduction

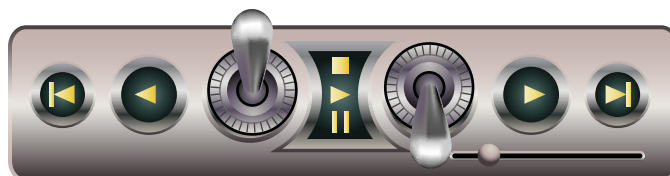
As a Flight Surgeon (FS) or Aeromedical Physician Assistant (APA), you will have to make dispositions and recommendations to the local unit commander on the aeromedical fitness of aircrew members. You will have to know the medical and aeromedical evaluation requirements and standards in order to best articulate these decisions. If aircrew members do not meet aeromedical standards as outlined in AR 40-501, chapter 4, you need to know and understand the medical and aeromedical implications of these conditions. You will need to be familiar with the information required to recommend and request waivers, and the follow-up information required if a waiver is granted. Being a FS/APA is involved, built on the foundation of standard medical practice and care, and utilizes additional training to apply and provide the best medical practice to keep aircrew flying.

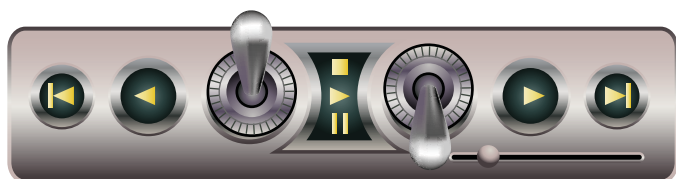
This lesson discusses aeromedical clinical references that provide current guidance for aeromedical fitness recommendations. It is focused on recent changes to the Aeromedical Policy Letters (APLs) at the time of this writing and is not intended to be comprehensive. These references have been developed and updated by senior aeromedical personnel and managed through the US Army Aeromedical Activity (AAMA), with final approval through the Office of the Surgeon General for the ARs and through the Commander, USAAMC, (and in the near future Director, Office of Aeromedical Proponency) for the ATBs and APLs. Website locations are provided for you to obtain the most current versions of these references. We recommend that you make a personnel electronic download aeromedical reference library on your computer's hard drive along with a portable backup

This lesson is not evaluated on the final exam for the Flight Surgeon Refresher Course, but is intended for your information.

## Objectives:

- a. Discuss recent changes to aeromedical policy for selected medical conditions.
- b. Describe the capabilities and utility of the Aeromedical Electronic Resource Office (AERO) for completing and submitting aeromedical work to AAMA for review and disposition.
- c. Review and be familiar with commonly encountered conditions, key points, and noted requirements or pitfalls with submitting for waiver or Information Only (IO) status.





## AERO

AERO (Aeromedical Electronic Resource Office) is the Army's paperless physical exam system for aeromedicine. AERO is a web-based program running on secure Windows-based web-browsers, such as Internet Explorer®. With Internet connectivity and ease of design, FS/APA have logged in from all parts of the world. Flight physicals (FDME/FDHS) and Aeromedical Summaries (AMS) may be generated, reviewed, and electronically submitted to the Army Aeromedical Activity (AAMA), the central review authority for aeromedical fitness and standards. The result is much more rapid and relevant review of information, disposition, and waiver or suspension. Relevance and timely response is the transition that AERO has brought to AAMA, the field FS/APA, and units. If you do not currently have an account on the system or need help using it, please contact AAMA directly for help getting live with AERO.

## Specific Policy Changes

As discussed in other lessons, Aeromedical Policy is published by AAMA in the form of the Aeromedical Policy Letters (APLs) and Aeromedical Technical Bulletins (ATBs). Policies are continually being updated, and the following list represents a snapshot of some of the salient current updates. The most current version of the APLs may be downloaded from the AAMA website:

<http://usasam.amedd.army.mil>

The Society of US Army Flight Surgeons has taken the same document and packaged it with AR 40-501 and some other great quick reference tools in a professionally printed package entitled "The Flight Surgeon's Aeromedical Checklists." They also have a nice binder/divider system available to keep the policies at your fingertips. Contact the Society for more information.

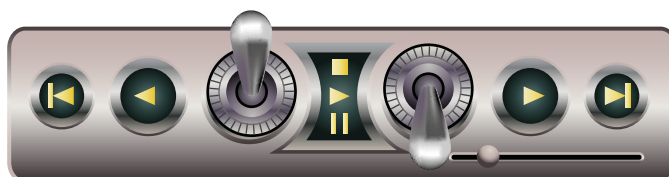
Please be sure to review the actual policy letter prior to completing an aeromedical summary for any individual aircrew member.

## Hypertension (updated 2004)

- Aggressive primary prevention
- Use of ARBs approved along with ACE-Inhibitors, Diuretics, and select Ca++ blockers approved. Beta-blockers are NOT approved for pilots.
- Evaluation straight forward—no need for CXR or Slit-Lamp Exam (SLE).
- No mandatory 30-day grounding period for starting medication—observe for side effects (SE) and may return to flight when safe and BP controlled (less than 140/90 on 3-day BP evaluation).
- Goal—treat borderline cases, may be more aggressive and quick than Primary Care, may wean off with improved lifestyle if stable.
- Requires AMS for the diagnosis. Medications require annual labs for follow-up. Change of meds—state on follow-up FDME/FDHS. Off meds—need AMS to amend waiver for no labs.

## Hyperlipidemia (updated 2005)

- Aggressive primary prevention to prevent CAD. Do not wait until 40, especially with Cardiovascular Screening Program (CVSP).
- Defined as Total Cholesterol > 255 (not 270).
- INFORMATION ONLY, no waiver needed.
- Lab follow-up required on FDME/FDHS annually. Enter in AERO.
- Most medications allowed. Ground for sufficient period to observe for side effects before local clearance. Provide information on FDHS/FDME.
- Pay attention to low HDL, high triglyceride, high LDL.



## Impaired Glucose Tolerance and Diabetes Mellitus

- Defined as FBS  $\geq 110$  on 2 separate samples.
- If present, need HbA1C and 2-hour GTT to define whether Type 2 DM or Impaired Glucose Tolerance/Impaired Fasting Glucose.
- Insulin use not permitted (permanently disqualified).
- Oral Medications waiverable on a case-by-case basis. Biguanides, TZD's, Acarbose may be waived providing no side effects or hypoglycemic bouts. Sulfonylureas not waiverable in most cases due to propensity for hypoglycemia.
- Waiver requirements—A1C  $< 7.0$ , BG controlled, no side effects, lifestyle improvements.

## Metabolic Syndrome (added 2005)

- Marker for Cardiovascular Risk Factors and lifestyle management issues making use of aggregate data from the FDME/FDHS.
- Diagnosis consists of 3 or more of 5 listed attributes
  - **FBS  $\geq 110$  or meds used.**
  - **HDL  $\leq 40$  (male) or 35 (female)**
  - **Triglycerides  $\geq 150$**
  - **Systolic BP  $\geq 130$  or Diastolic BP  $\geq 85$  or meds used.**
  - **Abdominal Circumference  $\geq 102$  cm (males) or  $\geq 88$  cm (females)**
- AERO is now programmed to calculate BMI. If BMI  $\geq 30$ , measure Waist Circumference in cm. Enter on page 4, 2808, or in comments in FDHS.
- If over 40, constitutes Level 1 failure for CVSP
- If meeting diagnosis for Metabolic Syndrome, it is quite common to have another waiverable or I/O issue (hypertension, dyslipidemia, impaired glucose tolerance or more).
- Metabolic Syndrome is I/O at this point, but warrants comment or AMS for other applicable issues.

## Cardiovascular Screening Program (4 Levels)

**General.** Applies to all aviation personnel. Failure of any one criterion is a level failure—proceed to next Level. AERO is programmed to identify Level 1 Pass or Failure. Risk factor management is the key!

### Level 1—Risk Factor Assessment

- LDL  $> 190$  = failure
- Total Chol  $> 270$  = failure
- Total Chol: HDL Ratio  $> 6.00$  = failure
- Framingham Risk Index  $> 7.5$  = failure
- Metabolic Syndrome = failure

### Level 2—AGXT or EBCT, must be within 3 years

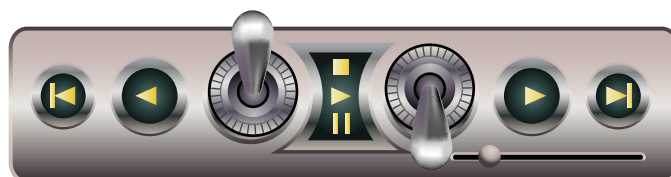
- Cardiac Fluoroscopy deleted
- AGXT—submaximal effort, failure if 1mm ST depression, electrically positive, or borderline
- EBCT—failure if Calcium score  $> 400$ , or concerning comments from report.
- If failed either test, temporary grounding
- Enter results on FDHS or FDME. If done within 3 years, so state (don't repeat annually) and continue to fly. Work on Risk Factors!

### Level 3—Non-invasive (Stress Thallium or Stress Echo)

- Perform Stress Thallium OR Stress Echo
- If normal, alert AAMA and may return to flight while submitting results on FDME/FDHS. Work on Risk Factors.
- If either test is abnormal, alert AAMA and proceed to Level 4. Keep temporarily grounded.
- Echo and 24-hour Holter deleted from program.

### Level 4—Invasive

- Cardiac Cath
- If normal, return to flight after review with AAMA and recovery.
- If abnormal, review with AAMA.
- Aggregate scoring of the number of lesions is no longer part of the criteria for waiver or suspension for CAD, but degree of severity and functional assessment.



## Coronary Artery Disease

- Significant change in management since 2004—see APL.
- CABG is not considered for waiver
- Stents and/or PCI may be waived providing total clinical and functional assessment is favorable. Risk factors must be controlled.
- Will require close follow-up and Non-invasive Functional assessment at a minimum of every 3 years.
- Cardiac Catheterization requirement for follow-up not required unless clinically indicated or recommended by the cardiologist.
- Myocardial infarction is not waived.
- Abnormal Cardiac motion and ischemia (reversible or non-reversible) likewise are not normally waived.

## HIV (added 2004)

- Diagnosis alone not permanently grounding. Temporarily ground while undergoing evaluation and work-up. Allow time for adjustment period and complete assessment psychologically.
- May be considered for waiver IF: clinically stable and asymptomatic and neurocognitively/psychologically “normal.” Medication use (HAART) while not currently waived, may be considered on a case-by-case basis with advances in therapy and minimal to no adverse reactions.
- Non-deployable
- Waiver requirements: quarterly Infectious Disease eval and every 3-6 month neurocognitive assessment.

## Abnormal Pap Smears

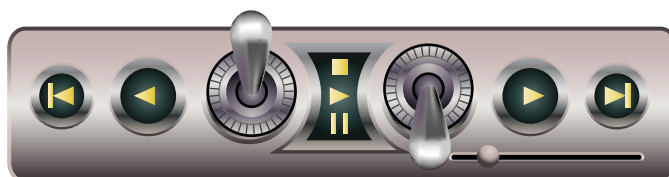
- Not required for initial flight physicals on any class. Note latest result if done by outside provider with date.
- Follows the Bethesda Classification for disposition.
  - ASCUS and LGSIL are I/O conditions.
  - HGSIL and CIS/Cervical CA require waiver.
- Temporarily ground and locally manage treatment issues unless complications exist which would interfere with flight duties.

## Hepatitis

- Hepatitis A & B policies unchanged.
- Hepatitis C with guidelines for evaluation and follow-up
- Grounded while undergoing treatment

## Corneal Refractive Surgery

- Now an Information Only condition if within standards, otherwise waiver/ETP.
- Open to all classes. Update and Factsheet available online and in APLs.
- Initial submission or reporting needs to include 5 things:
  - Pre- and post-op cycloplegic refraction
  - 3 Post-op acuities with manifest
  - Slit lamp exam
  - Post-op Corneal topography
  - Low Contrast Sensitivity
  - If all within standards, I/O and follow annual requirements
- If not within standards, need AMS for ETP or waiver.
- Review the policy letter!



## Allergic/non-allergic Rhinitis

- Now Information Only for cases that are medically managed with appropriate medication without side effects or complications.
- Time limits removed in addition to requirement for sinus films, nasal smears, and blood eosinophil counts.
- Immunotherapy, complicated cases require AMS for waiver/ETP
- Expanded non-sedating medication list for use (oral and intranasal).

## Renal Stones

- Rated aviator, first case, isolated, normal evaluation, work-up, and recovery may be submitted as Information Only.
- Initial, complex, recurring cases require AMS for waiver.
- APL revised, IVP and/or CT amenable for evaluation
- Use the Renal Stone Worksheet
- Submit with complete information

## Hypo/hyperthyroidism

- Both conditions amenable for waiver/ETP.
- Must be Euthyroid, no complications, no medication side effects
- Annotate labs annually although APL current requires on each comprehensive (this will change).

## Headache/migraine

- Good history and Neurology evaluation paramount to success.
- May be waived with Triptan use with post-medication use grounding period if:
  - Infrequent nature and low recurrence pattern.
  - Triggers recognizable
  - Minimal impact on duty or performance
  - Command support

## Smoking Cessation

- Zyban use Information Only if following APL guidelines
- 1st 2 weeks of medication, temporary DNIF, then after review and at discretion of FS/APA.
- Treatment program 2-3 months for medication and formal program may last longer.
- Goal is successful cessation.

## Overweight Aircrew

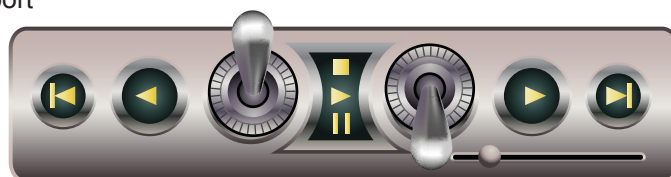
- APL removed, but a growing concern
- Look for underlying causes and address lifestyle issues
- Assist command with AR 600-9, which is administrative and not aeromedical.
- Safety issues with cockpit environment, wear of equipment, entrance and egress, flight control manipulation. Address to command and Unit Safety.
- Looking closely at this issue and may be revision in the next FY.

## Contact Lens Wear

- Information Only for all classes, provided initial and annual follow-up evaluations are completed.
- Evaluations need to include current contact lens parameters, visual acuity near and far, slit-lamp examination, and note of any complications from use.
- Need to have glasses in possession in case of problem or complication.

## Atopic Dermatitis

- Mild and moderate cases are usually Information Only.
- Non-steroidal topical treatments approved for use with waiver.
- Oral medication and intermediate or higher topical steroids warrant temporary DNIF until under control.



## Onychomycosis

- Cosmetic issue, weigh treatment options with duties
- Oral antifungals ok, but need temporary grounding with dosing
- Monthly labs needed for oral medication and need comment on FDME.
- Chronic topical therapy may be waived.
- Griseofulvin not recommended for use for this problem.

## Psoriasis

- Additional treatments authorized
- Dermatology consultation needed
- All cases require waiver or ETP request

## GERD

- Currently, waiver is required for the CONDITION if aviator has one or more of the 5 warning symptoms or signs:
  - Dysphagia or odynophagia
  - Persisting or progressing symptoms while on chronic therapy
  - Bleeding evident or iron-deficiency anemia
  - Unexplained weight loss
  - Other extraesophageal symptoms
- Wording on medications confusing (this will be revised in FY 07)
  - H2 Blockers are Information Only except if chronically used, then class 3 and requires waiver
  - PPI are class 3 and require waiver
  - Thus condition may be Information Only, but meds are not—submit AMS for waiver.

## Peptic Ulcer Disease

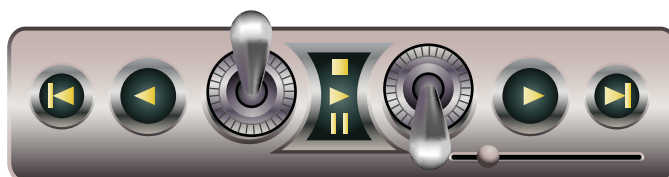
- H. pylori significant impact. Single cases amenable to ETP or waiver after successful treatment. Recurrent cases are reviewed on a case-by-case basis.
- Insure medically evaluated and information required is included in AMS.

## Ulcerative Colitis and Crohn's Disease

- Both require AMS.
- Mesalamine authorized for control.
- Pay attention to Info required and annual submission requirements.
- Recurrences and relapses should raise level of concern for both flight duties as well as deployability. May need DQ and suspension until controlled and stable.

## Alcohol Related Disorders (Misuse)

- Requires evaluation by ASAP to rule-out underlying disorder on all.
- Single episode—Information Only
- Multiple Episodes require additional evaluation (is this really "Misuse?")
- Evaluation considered on a case-by-case basis and reviewed by CG, HRC.



## Anxiety/depression and SSRI's (Updated 2006)

- Waiver possible after completion of requirements:
  - Comprehensive FDME
  - Complete psychiatric and psychology evaluation—if not aeromedically trained, will have case reviewed by Aeromedical Psychiatry Consultant.
  - Resolution of symptoms on SSRI and stable dose for 4 months.
  - Neuropsychological testing demonstrating normal on medications
  - Command support and favorable In-flight/ Duty Evaluation.
- Initial applicants closely scrutinized and rarely granted ETP, but important to complete evaluation process and submit for review.
- Insure following APL guidelines and prescribed follow-up regimen.

## Medications And Herbal Supplements

- There are a number of changes and this chapter generally remains in a state of flux. Review the APLs.
- Call AAMA for consideration of new medications as they come into mainstream.
- Recognize aeromedical impact and concern for the underlying condition.
- Herbal supplements given similar class structure, warranting asking and documenting on FDME/FDHS.
- Pay attention to restrictions and time limitations.

## Hearing Loss

- AERO allows inputting Speech Recognition Testing on Page 4 of 2808.
- Waiver readily available provided submission of Audiology evaluation and testing results.
- ETP amenable with AMS and inclusion of audiology evaluation.

## ADHD

- Strattera and Wellbutrin approved for waiver and use by rated aviation personnel. ETP requests reviewed on case-by-case basis.
- AMS needs to include Information and Psychological Testing results requested.

## Anthropometry

- Evaluations need to be conducted IAW established guidelines from DES and Fort Rucker.
- For Total Arm Reach (TAR) less than 159 cm, evaluation must be done at/by Fort Rucker Standardization Instructor Pilot.

## Eating Disorders

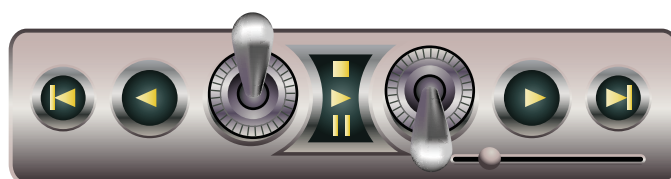
- Majority DQ, no waiver.
- Waiver possible if symptom-free, off medication, stable in alternate duty for at least 1 year, and meets Army and flight standards.

## S U M M A R Y

The above list is just a partial list of conditions and information regarding the condition, acceptable treatment and medications, and considerations for waivers or exception to policies. It is intended as a quick update and is NOT all-inclusive. Flight surgeons, Aeromedical Physician Assistants, Aviation Medical Examiners, and Aeromedical Nurse Practitioners need to review specific policies as well as review published notes and updates on the AAMA webpage to maintain currency.

**Remember, updating of the Aeromedical Policies is an ongoing evolution!!**

Highly suggested is bookmarking the page as well as providing the link to commanders and patients. AAMA is planning to review and update a number of policies over the next year, revising and amending a significant number with the changing practice of medicine and impact of new medication or techniques. If you have any questions, concerns, thoughts, or suggestions for revisions—contact AAMA ([aama@amedd.army.mil](mailto:aama@amedd.army.mil)).



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